# PATENT ABSTRACTS OF JAPAN

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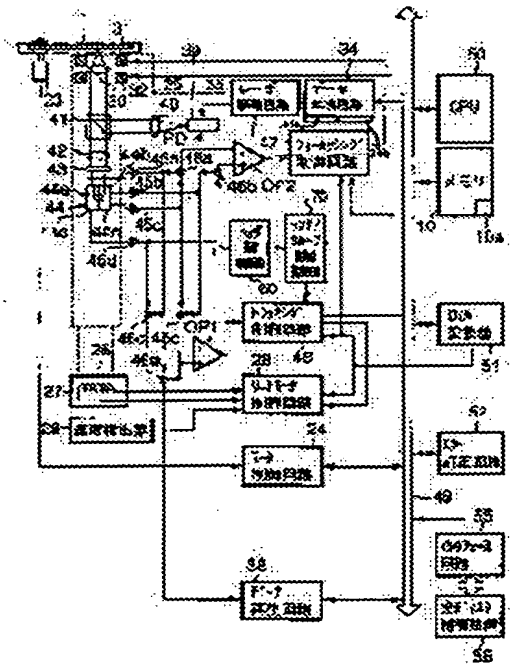
## (54) OPTICAL DISK, OPTICAL DISK RECORDING AND REPRODUCING DEVICE AND OPTICAL RECORDING AND REPRODUCING METHOD

(57)Abstract:
PROBLEM TO BE SOLVED: To provide an optical disk recording and reproducing device capable of correctly executing of the changing over between a land tracking and a groove tracking.
SOLUTION: This device is provided with reproducing means 25 to 38 for recording and the reproducing data to/from an optical disk having spiral land and groove tracks, having plural continuous sectors consisting of prescribed track lengths and including header data area and user data area, a discriminating means 50 for discriminating whether sector areas correspond to the land track or the groove track are discriminated from data capable of discriminating whether the sector area correspond to the land track or the groove track, and a tracking control means 48. Thus, the tracking is controlled in accordance with the result discriminated by a discriminating means 50.



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[Patent number]
[Date of registration]
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## CLAIMS

[Claim(s)]
[Claim 1] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined The optical disk characterized by equipping said header data area with the sector field applicable to which truck of said land truck and said groove truck, or identifiable data.
[Claim 2] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined The optical disk characterized by equipping said header data area with two or more ID data which have the predetermined relation for identifying which truck of said land truck and said groove truck it is a sector field applicable to.
[Claim 3] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined the sector field established in said land truck -- ID number [ of ** a 1st ] > -- with ID number which fills the size relation of 2nd ID number the sector field established in said groove truck -- 1st ID number -- < -- the optical disk characterized by having ID number which fills the size relation of 2nd ID number.
[Claim 4] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or it sets to the optical disk record regenerative apparatus which reproduces the recorded data. It is data reproduced by playback means to reproduce the data recorded on said optical disk, and this playback means. From the sector field or the identifiable discernment data applicable to which truck of said land truck included in said header data, and said groove truck A discernment means to identify whether it is the sector field where the sector field which has this header data corresponds to which truck of said land truck and said groove truck, The optical disk record regenerative apparatus characterized by having the tracking control means which controls tracking according to the discernment result by this discernment means.
[Claim 5] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or it sets to the optical disk record regenerative apparatus which reproduces the recorded data. It is data reproduced by playback means to reproduce the data recorded on said optical disk, and this playback means. A discernment means to discriminate whether it is the sector field where the sector field which has these ID data as header data corresponds to which truck of said land truck and said groove truck from the relation of two or more ID data contained in said header data, The optical disk record regenerative apparatus characterized by having the tracking control means which carries out switch control of the land tracking according to said land truck, and the groove tracking according to said groove truck according to the discernment result by this discernment means.
[Claim 6] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or it sets to the optical disk record regenerative apparatus which reproduces the recorded data. It is data reproduced by playback means to reproduce the data recorded on said optical disk, and this playback means. the size relation of 1st [ which was contained in said header data ], and 2nd ID numbers -- ID number [ of ** a 1st ] > -- at the time of 2nd ID number as the sector field which corresponds the sector field which has these ID number as header data to said land truck -- identifying -- 1st ID number -- < -- at the time of 2nd ID number A discernment means to identify the sector field which has these ID number as header data as a sector field applicable to said groove truck, The optical disk record regenerative apparatus characterized by having the tracking control means which carries out switch control of the land tracking according to said land truck, and the groove tracking according to said groove truck according to the discernment result by this discernment means.
[Claim 7] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or when reproducing the recorded data, the data recorded on said optical disk are reproduced. From the sector field or the identifiable discernment data applicable to which truck of said land truck which is data obtained by this playback and was included in said header data, and said groove truck The optical disk record playback approach characterized by what the sector field which has this header data identifies which truck of said land truck and said groove truck it is a sector field applicable to, and controls tracking for according to the discernment result by this discernment.
[Claim 8] It has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data

## DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the optical disk which can record data on the both sides of a spiral-like land truck and a groove truck. Moreover, this invention relates to the optical disk record regenerative apparatus which reproduces the data with which data were recorded and recorded to such an optical disk, and the optical disk record playback approach.
[0002]
[Description of the Prior Art] There is what has possible recording data on the both sides of a land truck and a groove truck other than what has possible recording data on either a land truck or a groove truck in an optical disk.
[0003] in the case of the latter, a land truck and a groove truck are identified at the time of data-logging playback, and the land tracking according to a land truck and the groove tracking according to a groove truck are changed -- required -- certain ** Conventionally, the land truck and the groove truck were discriminated from the description of the regenerative signal reproduced from the optical disk in analog.
[0004]
[Problem(s) to be Solved by the Invention] As **** described above, in analog-discernment, the problem was in discernment precision that it is easy to be influenced of the blemish on an optical disk, meandering of a beam, etc. As [ changed / accidentally / for this reason, / by incorrect detection / land tracking and groove tracking ]
[0005] The object of this invention is accomplished in view of a situation which was described above, and is about a switch with land tracking and groove tracking to offer the optical disk which can be performed to accuracy, an optical disk record regenerative apparatus, and the optical disk record playback approach.
[0006]
[Means for Solving the Problem] In order to solve the above-mentioned technical problem and to attain the object, the optical disk and optical disk record regenerative apparatus of this invention are constituted as follows.
(1) According to this invention, it has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined The optical disk characterized by equipping said header data area with the sector field applicable to which truck of said land truck and said groove truck or identifiable data is offered.
[0007] (2) According to this invention, it has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined The optical disk characterized by equipping said header data area with two or more ID data which have the predetermined relation for identifying which truck of said land truck and said groove truck it is a sector field applicable to is offered.
[0008] (3) According to this invention, it has spiral-like the land truck and groove truck which are formed of a land and the groove section. In the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined the sector field established in said land truck -- ID number [ of ** a 1st ] > -- with ID number which fills the size relation of 2nd ID number the sector field established in said groove truck -- 1st ID number -- < -- the optical disk characterized by having ID number which fills the size relation of 2nd ID number is offered.
[0009] (4) According to this invention, it has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or it sets to the optical disk record regenerative apparatus which reproduces the recorded data. It is data reproduced by playback means to reproduce the data recorded on said optical disk, and this playback means. From the sector field or the identifiable discernment data applicable to which truck of said land truck included in said header data, and said groove truck A discernment means to identify whether it is the sector field where the sector field which has this header data corresponds to which truck of said land truck and said groove truck, The optical disk record regenerative apparatus characterized by having the tracking control means which controls tracking according to the discernment result by this discernment means is offered.
[0010] (5) According to this invention, it has spiral-like the land truck and groove truck which are formed of a land and the groove section. As opposed to the optical disk with which the format which has the sector field where plurality including the header data area where it consists of predetermined truck length, and header data are recorded, and the user data area where user data are recorded continued was defined Record of data, Or it sets to the optical disk record regenerative apparatus which reproduces the recorded data. It is data reproduced by playback means to reproduce the data recorded on said optical disk, and this playback means. A discernment means to discriminate whether it is the sector field where the sector field which has these ID data as header data corresponds to which truck of said land truck and said groove truck from the relation of two or more ID data contained in said header data, The optical disk record regenerative apparatus characterized by having the tracking control means which carries out switch control of the land tracking according to said land truck and the groove tracking according to said groove truck

[0024] Moreover, by the laser control circuit 33, the semiconductor laser oscillator 39 drives and a laser beam is generated. The laser control circuit 33 amends the quantity of light of the laser beam by the semiconductor laser oscillator 39 according to the monitor current from the photodiode PD for the monitors of the semiconductor laser oscillator 39.
[0025] The laser control circuit 33 operates synchronizing with the clock signal for the record from the PLL circuit which is not illustrated. This PLL circuit carries out dividing of the basic clock signal from the oscillator which is not illustrated, and generates the clock signal for record.
[0026] And the laser beam generated from the semiconductor laser oscillator 39 driven by the laser control circuit 33 is irradiated on an optical disk 1 through a collimator lens 40, the half prism 41, and an objective lens 30, and the reflected light from this optical disk 1 is led to a photodetector 44 through an objective lens 30, the half prism 41, a condenser lens 42, and a cylindrical lens 43.
[0027] The above-mentioned photodetector 44 is constituted by the photodetection cels 44a, 44b, 44c, and 44d of quadrisection. The output signal of photodetection cel 44a of the above-mentioned photodetector 44 The end of adder 46a is supplied through amplifier 45a. The output signal of photodetection cel 44b The end of adder 46b is supplied through amplifier 45b, the output signal of photodetection cel 44c is supplied to the other end of adder 46a through amplifier 45c, and a photodetection cel 44d output signal is supplied to the other end of adder 46b through 45d of amplifier.
[0028] The output signal of photodetection cel 44a of the above-mentioned photodetector 44 The end of adder 46c is supplied through amplifier 45a. The output signal of photodetection cel 44b The end of 46d of adders is supplied through amplifier 45b, the output signal of photodetection cel 44c is supplied to the other end of 46d of adders through amplifier 45c, and a photodetection cel 44d output signal is supplied to the other end of adder 46c through 45d of amplifier.
[0029] The output signal of the above-mentioned adder 46a is supplied to the reversal input edge of the differential amplifier OP2, and the output signal of the above-mentioned adder 46b is supplied to the noninverting input edge of this differential amplifier OP2. Thereby, the differential amplifier OP2 supplies the signal (focal error signal) about a focal point to the focusing control circuit 47 according to the difference of the above-mentioned adders 46a and 46b. The output signal of this focusing control circuit 47 is supplied to a drive coil 31, and it is controlled so that a laser beam always serves as a focus just on an optical disk 1.
[0030] The output signal of the above-mentioned adder 46c is supplied to the reversal input edge of the differential amplifier OP1, and the output signal of the 46d of the above-mentioned adders is supplied to the noninverting input edge of this differential amplifier OP1. Thereby, the differential amplifier OP1 supplies a tracking-error signal to the tracking control circuit 48 and the header location detector 60 as a tracking control means according to an above-mentioned adders [ 46c and 46d ] difference. The tracking control circuit 48 creates a truck driving signal according to the tracking-error signal supplied from the differential amplifier OP1. The header location detector 60 detects the location of a header. Moreover, the various signals outputted from this header location detector 60 are supplied to a land / groove change-over inspection appearance circuit 70. This land / groove change-over inspection appearance circuit 70 detect the switching point of a land and a groove.
[0031] The truck driving signal outputted from the above-mentioned tracking control circuit 48 is supplied to the drive coil 32 of said direction of tracking. Moreover, the tracking-error signal used in the above-mentioned tracking control circuit 48 is supplied to the linear motor control circuit 28.
[0032] Change of the reflection factor from the pit (record data) where the signal which added focusing and the sum signal of an each photodetection cels [ of the photodetector 44 in the condition of having performed tracking / 44a-44d ] output, i.e., the output signal from Adders 46c and 46d, by adder 46e as mentioned above was formed on the truck is reflected. This signal is supplied to the data regenerative circuit 38, and the data currently recorded are reproduced in this data regenerative circuit 38.
[0033] After the playback data reproduced in this data regenerative circuit 38 perform an error correction in the error correction circuit 52 using error correction code ECC given, they are outputted to the optical disk control unit 56 as an external device through an interface circuitry 55.
[0034] Moreover, when the objective lens 30 is moved in the above-mentioned tracking control circuit 48, the linear motor control circuit 28 moves a linear motor 26 25, i.e., an optical head, so that an objective lens 30 may be located near the center position in the optical head 25.
[0035] Moreover, the data generation circuit 34 is established in the preceding paragraph of the laser control circuit 33. It has ECC block data generation circuit 34a which changes the format data of an ECC block as record data supplied to this data generation circuit 34 from the error correction circuit 52 into the format data of the ECC block for [ which gave the synchronous code for an ECC block ] record, and modulation-circuit 34b which modulates the record data from this ECC block data generation circuit 34a by the 8-16 code-conversion method.
[0036] The dummy data for error checking read from the record data with which the error correction sign was given by the error correction circuit 52, or memory 10 is supplied to the data generation circuit 34. The record data from the optical disk control device 56 as an external device are supplied to the error correction circuit 52 through an interface circuitry 55 and a bus 49.
[0037] The error correction circuit 52 gives Sector ID (logical address number), and generates the format data of an ECC block while it gives each error correction sign (ECC1, ECC2) of a longitudinal direction [ as opposed to the record data of the sector unit in every 4 K bytes for 32 K bytes of record data supplied from the optical disk control device 56 ], and a lengthwise direction.
[0038] Moreover, D/A converter 51 used in order to deliver and receive information to this optical disk unit between the focusing control circuit 47, the tracking control circuit 48, the linear motor control circuit 8, and CPU50 that controls the whole optical disk unit, respectively is formed.
[0039] The above-mentioned motor control circuit 24, the linear motor control circuit 28, the laser control circuit 33, the data regenerative circuit 38, the focusing control circuit 47, the tracking control circuit 48, and error correction circuit 53 grade are controlled by CPU50 through a bus 49, and this CPU50 is made as [ perform / the control program recorded on memory 10 / predetermined actuation ].
[0040] The control program is recorded or the above-mentioned memory 10 is used for data logging. this memory 10 -- each above-mentioned zone 3a and -- it has table 10a on which the relation of the rate data (engine speed) and the number of sectors of one truck to 3x, 4, 5, and 6 is recorded.
[0041] Next, the change rate of a land truck and a groove truck is detected in analog, and how (the analog-tracking

information field, and 3 bytes (24 bits) of the sector number field (logical sector number as the logical address which shows the logical location on a truck).
[0060] Furthermore, this sector information is constituted by the 2 bits reserve field, the 2-bit PID number field, the sector type field of a triplet, and the 1-bit layer number field.
[0061] With this operation gestalt, nothing special is recorded on the reserve field. A PID number is recorded on the PID number field. For example, "11" which shows PID4 is recorded on the PID number field in "00" which shows PID1 to the PID number field in the header 1 fee field, "01" which shows PID2 to the PID number field in the header 2 fee field, "10" which shows PID3 to the PID number field in the header 3 fee field, and the header 4 fee field.
[0062] In this invention, land tracking and groove tracking are changed from the relation of each PID number recorded on the PID number field in the header 1 field - the header 4 field. A switch of the land tracking using this PID number and groove tracking is called the tracking control approach by the PID number, and it explains in detail later.
[0063] "000" which shows that it is a read-only sector (Read only sector) to the sector type field, "001" which shows that it is a reserve sector (Reserved), "100" which shows that it is the head sector (Rewritable first sector) which can rewrite "010" or "011", a land, or a groove truck, "101" which shows that it is the last sector (Rewritable last sector) which can rewrite a land or a groove truck, "110" which shows that it is a sector before [ one ] the last sector which can rewrite a land or a groove truck (Rewritable before last sector), "111" which shows that it is the sector (Rewritable other sector) of others which can rewrite a land or a groove truck is recorded.
[0064] In this invention, land tracking and groove tracking are changed based on the sector type recorded on the sector type field. A switch of the land tracking by this sector type and groove tracking is called the tracking control approach by the sector type, and it explains in detail later.
[0065] "1" which shows a layer 1 or 0, or "0" is recorded on the layer number field. Next, with reference to drawing 6 - drawing 9 , the tracking control approach by the PID number is explained.
[0066] First, with reference to drawing 6 and drawing 7 , the tracking control approach by the PID number of the header field 11 prepared between the groove sector, the groove sector or the land sector, and the land sector is explained.
[0067] The header field 11 is constituted by two or more pits P as shown in drawing 6 . The core of the pit which constitutes header H12-1 and H12-2 exists in the location on the same line of the tangent of the land sector L02 and the groove sector G12 (or the land sector L01 and the groove sector G11). The core of the pit which constitutes header H22-3 and header H22-4 exists in the location on the same line of the tangent of the groove sector G12 and the land sector L22 (or the groove sector G11 and the land sector L21). The core of the pit which constitutes header H32-1 and header H32-2 exists in the location on the same line of the tangent of the land sector L22 and the groove sector G32 (or the land sector L21 and the groove sector G31). The core of the pit which constitutes header H42-3 and header H42-4 exists in the location on the same line of the tangent of the groove sector G32 and the land sector L42 (or the groove sector G31 and the land sector L41). The core of the pit which constitutes header H52-1 and header H52-2 exists in the location on the same line of the tangent of the land sector L42 and the groove sector G52 (or the land sector L41 and the groove sector G51). The core of the pit which constitutes header H62-3 and header H62-4 exists in the location on the same line of the tangent of the groove sector G52 and the land sector L62 (or the groove sector G51 and the land sector L61).
[0068] Moreover, the PID (physical ID number) number of each header of the header field 11 prepared between the groove sector and the groove sector serves as relation as shown in drawing 7 . For example, it explains taking the case of the PID number of each header prepared between the groove sector G11 and the groove sector G12. Between the groove sector G11 and the groove sector G12, header H12-1 (header 1 field), header H12-2 (header 2 field), header H22-3 (header 3 field), and header H22-4 (header 4 field) are prepared. Moreover, for the PID number of header H12-1, the PID number of (n+3-N) header H12-2 is [ the PID number of (n+2N) header H22-4 of the PID number of (n+3N) header H22-3 ] (n+2Ns). That is, a comparison of PID of each header prepared between the groove sector and the groove sector forms the relation of > (PID number of the header 1 field or the header 2 field) (PID number of the header 3 field or the header 4 field).
[0069] On the other hand, the PID number of each header of the header field 11 prepared between the land sector and the land sector serves as relation as shown in drawing 7 . For example, it explains taking the case of the PID number of each header prepared between the land sector L21 and the land sector L22. Between the land sector L21 and the land sector L22, header H32-1 (header 1 field), header H32-2 (header 2 field), header H22-3 (header 3 field), and header H22-4 (header 4 field) are prepared. Moreover, for the PID number of header H32-1, the PID number of (n+N) header H32-2 is [ the PID number of (n+2N) header H22-4 of the PID number of (n+N) header H22-3 ] (n+2Ns). that is, -- if PID of each header prepared between the land sector and the land sector is compared -- < (PID number of the header 1 field or the header 2 field) (PID number of the header 3 field or the header 4 field) -- relation is materialized.
[0070] That is, if the relation of > (PID number of the header 1 field or the header 2 field) (PID number of the header 3 field or the header 4 field) becomes clear by header playback, it is identified as that whose sector after this header is a groove sector, and regeneration according to a groove sector can be performed. on the contrary, header playback -- < (PID number of the header 1 field or the header 2 field) (PID number of the header 3 field or the header 4 field) -- if relation becomes clear, it is identified as that whose sector after this header is a land sector, and regeneration according to a land sector can be performed.
[0071] In addition, discernment of the above-mentioned land sector and a groove sector shall be made by CPU50 as a discernment means. Moreover, the regeneration according to a discernment result, i.e., the land tracking according to a land truck, and the groove tracking according to a groove sector shall be performed by the tracking control circuit as a tracking control means.
[0072] Then, with reference to drawing 8 and drawing 9 , the tracking control approach by the PID number of the header field 11 established in between a groove sector and land sectors (i.e., the change of a groove and a land) is explained.
[0073] The header field 11 is constituted by two or more pits P as shown in drawing 8 . The core of the pit which constitutes header H20-3 and header H20-4 exists in the location on the same line of the tangent of the groove sector G10 and the land sector L20. The core of the pit which constitutes header H30-1 and H30-2 exists in the location on the same line of the tangent of the land sector L20 and the groove sector G30 (or groove sector G1n and land sector L2n). The core of the pit which constitutes header H40-3 and header H40-4 exists in the location on the same line of the tangent of the groove sector G30 and the land sector L40 (or land sector L2n and groove sector

sector type is predicted from the sector type information of the last sector (ST28), and tracking control is performed by this prediction result. that is, when the last sector is the last sector, it is predicted that a current sector is a head sector -- having -- the groove tracking from land tracking -- or it changes from groove tracking to land tracking (ST30). Moreover, when the sector type of a current sector and the sector type of the last sector are unknown, a current sector type is predicted from the sector type information of the sector before last.

[0087]

[Effect of the Invention] According to this invention, the optical disk which can be performed to accuracy, an optical disk record regenerative apparatus, and the optical disk record playback approach can be offered for a switch with land tracking and groove tracking.

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[Translation done.]

## DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] Drawing showing the outline configuration of the optical disk unit concerning one gestalt of implementation of this invention.
[Drawing 2] The top view showing the outline configuration of an optical disk.
[Drawing 3] The block diagram showing the outline configuration of an optical disk.
[Drawing 4] Drawing explaining the rotational frequency and the number of sectors around one truck in each zone of an optical disk.
[Drawing 5] Drawing showing the layout of the sector field, the layout of the header field, the layout of the PID field, and the layout of a sector information.
[Drawing 6] Drawing showing roughly the header field prepared between the groove sector, the groove sector or the land sector, and the land sector.
[Drawing 7] Drawing showing roughly the header field prepared between the groove sector, the groove sector or the land sector, and the land sector.
[Drawing 8] Drawing showing roughly the header field prepared between the groove sector and the land sector.
[Drawing 9] Drawing showing roughly the header field prepared between the groove sector and the land sector.
[Drawing 10] Drawing for explaining the tracking control by the sector type.
[Drawing 11] The flow chart for explaining the tracking control using analog-tracking control, the tracking control by the PID number, and the tracking control by the sector type.
[Drawing 12] Drawing showing the outline configuration of a header location detector.
[Drawing 13] Drawing showing the relation of a truck error signal, a header Tomonobu number, an inner header detection signal, and an outer header detection signal.
[Drawing 14] Drawing showing the outline configuration of a land / groove change-over inspection appearance circuit.
[Drawing 15] Drawing showing the relation of a header Tomonobu number, an inner header detection signal, an outer header detection signal, and a land / groove change-over signal.
[Description of Notations]
1 -- Optical disk
10 -- Memory
25 -- Optical head
31 32 -- Drive coil
33 -- Laser control circuit
38 -- Data regenerative circuit
48 -- Tracking control circuit
50 -- CPU

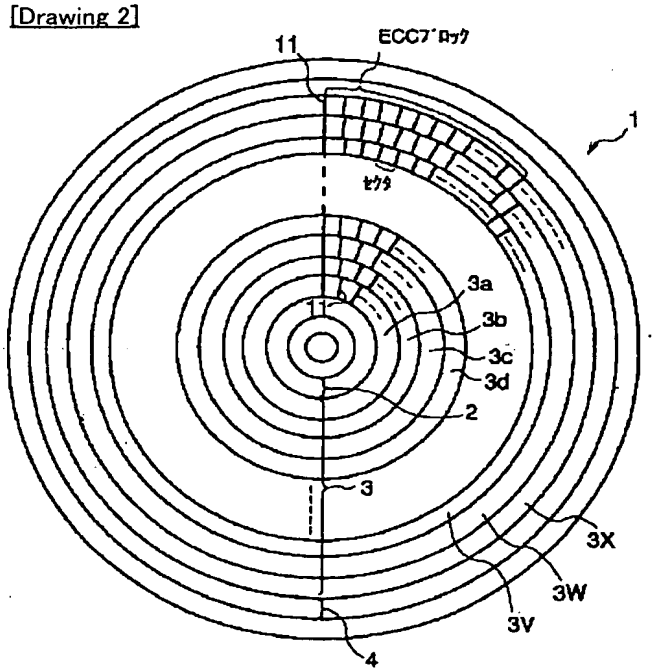
[Translation done.]

* NOTICES *

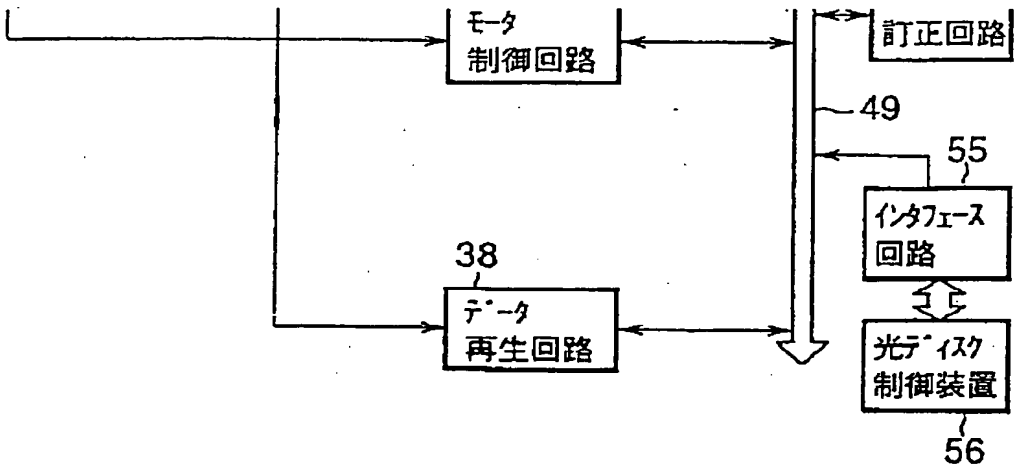


DRAWINGS

[Drawing 2]




[Drawing 3]

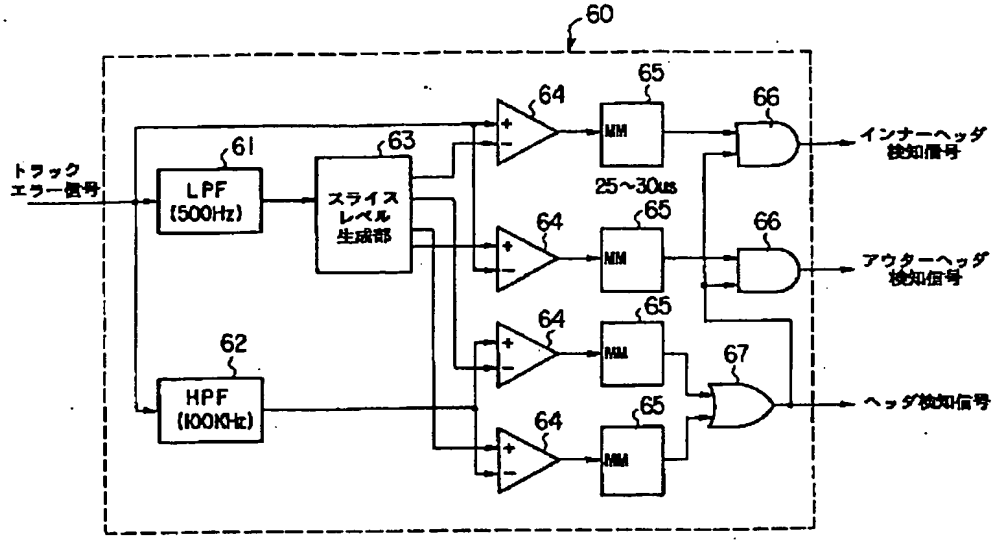



[Drawing 4]

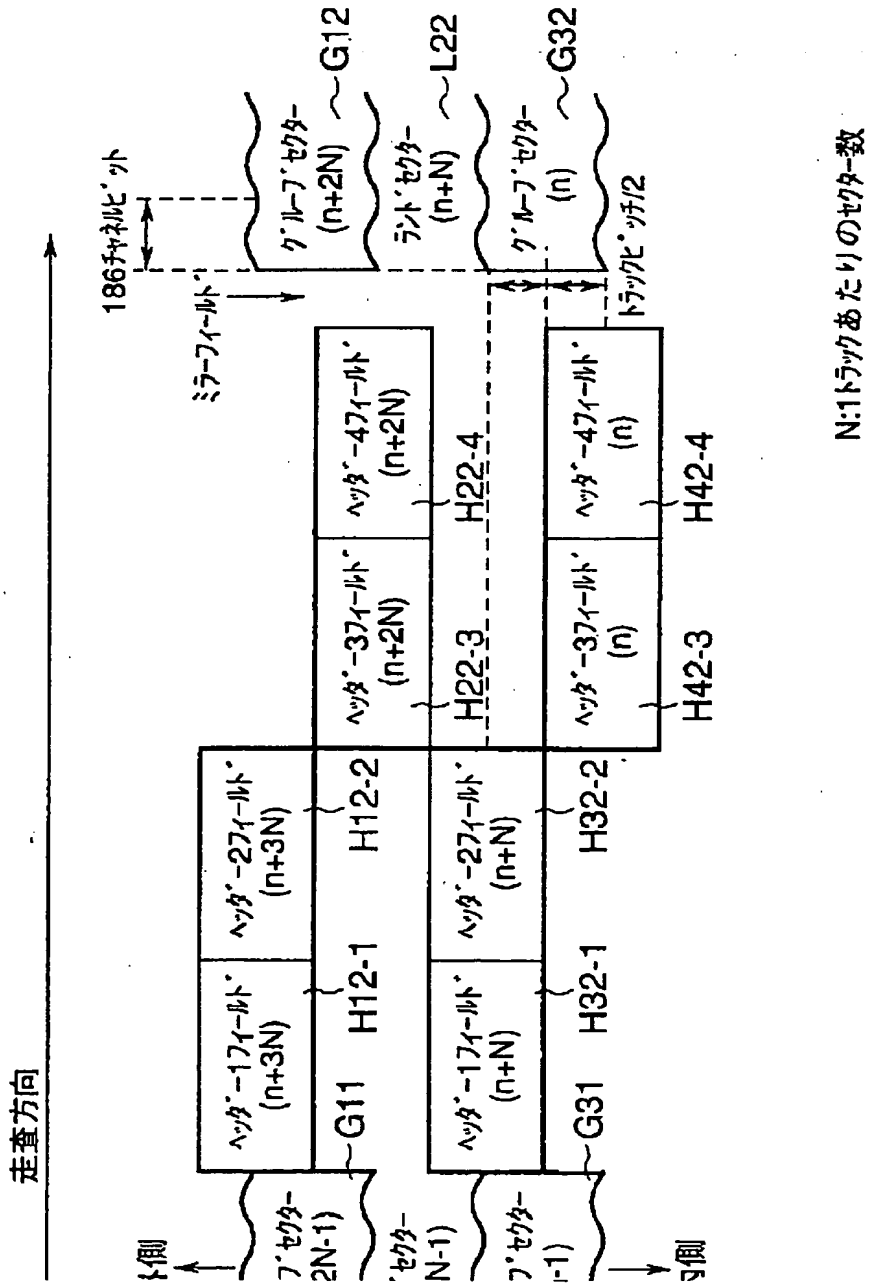
| | | 回転速度(Hz) | 1トラックのセクタ数 |
|---|---|---|---|
| リードインエリア | エンボスデータゾーン | 37.57 | 18 |
| | 書換可能データゾーン | 39.78 | 17 |
| 3a | ゾーン0 | 39.78 | 17 |
| 3b | ゾーン1 | 37.57 | 18 |
| 3c | ゾーン2 | 35.59 | 19 |
| データエリア | ⋮ | ⋮ | ⋮ |
| 3x | ゾーン23 | 16.91 | 40 |
| リードアウトエリア | | 16.91 | 40 |

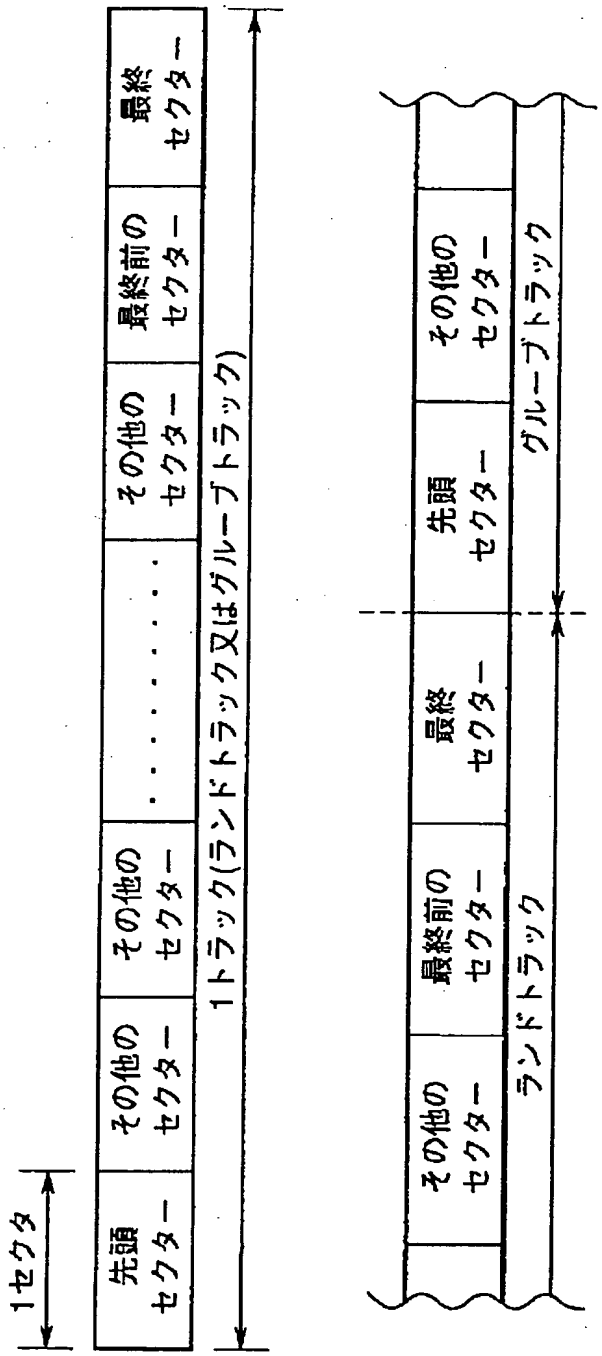
10a

[Drawing 5]

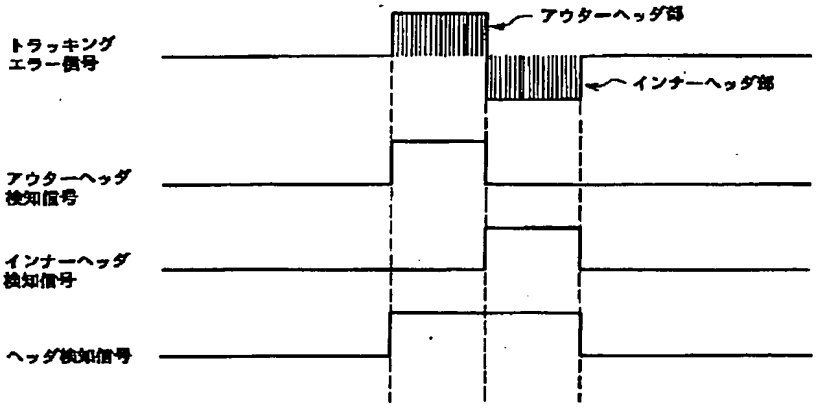

60
61
LPF
(500Hz)
62
HPF
(100KHz)
63
スライス
レベル
生成部
64
65
MM
66
67
25～30us
トラック
エラー信号
インナーヘッダ
検知信号
アウターヘッダ
検知信号
ヘッダ検知信号

[Drawing 7]

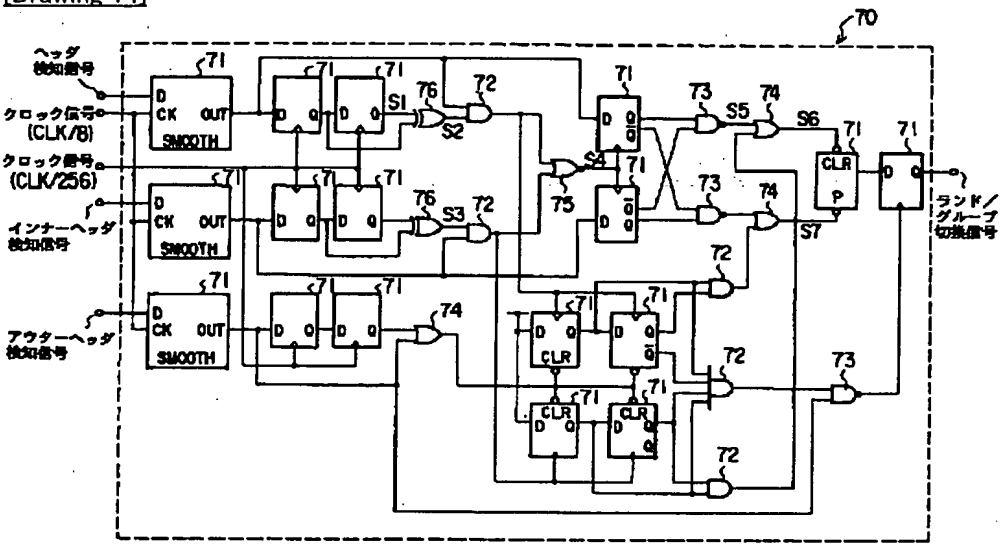

186チャネルビット
ミラーフィールド
グループセクター
(n+2N)
G12
ラストセクター
(n+N)
L22
グループセクター
(n)
G32
トラックピッチ/2
ヘッダ-4フィールド
(n+2N)
H22-4
ヘッダ-4フィールド
(n)
H42-4
ヘッダ-3フィールド
(n+2N)
H22-3
ヘッダ-3フィールド
(n)
H42-3
ヘッダ-2フィールド
(n+3N)
H12-2
ヘッダ-2フィールド
(n+N)
H32-2
ヘッダ-1フィールド
(n+3N)
H12-1
ヘッダ-1フィールド
(n+N)
H32-1
G11
G31
走査方向
N:1トラックあたりのセクター数


1セクタ
先頭セクター
その他のセクター
その他のセクター
・・・・・・・・・
その他のセクター
最終前のセクター
最終セクター
1トラック(ランドトラック又はグルーブトラック)
その他のセクター
最終前のセクター
最終セクター
先頭セクター
その他のセクター
ランドトラック
グルーブトラック

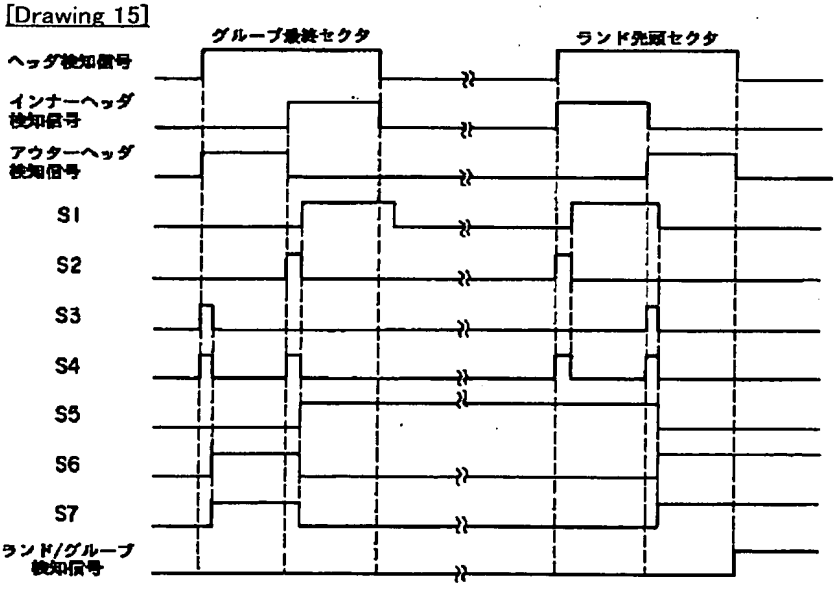
[Drawing 11]




[Drawing 14]




[Drawing 15]




[Translation done.]